

Appl. No. 10/510,417
Amdt. Dated February 10, 2009
Reply to Office Action of October 10, 2008

• • • R E M A R K S / A R G U M E N T S • • •

The Official Action of October 19, 2008 has been thoroughly studied. Accordingly, the following remarks are believed to be sufficient to place the application into condition for allowance.

By the present amendment the specification has been corrected to include omitted matter that is found in the text of applicants' original international application, PCT/JP2003/04456. Under the provisions of 37 CFR §1.57(a) applicants' international application is effectively incorporated by reference for omitted subject matter. Superfluous subject matter has been deleted from the specification.

Applicant submits that no new matter is added to the specification.

Also by the present amendment independent claims 1 and 5 have been changed to recite that an inner diameter of the cylinder is adaptedly formed not exceeding 20 mm such that the piston pump can be utilized in a blood pressure measuring device. This recitation of the limited diameter of the cylinder is found on page 12, lines 24-25 and is believed to add or associate structure to the previous recitation of a blood pressure measuring apparatus. That is, a blood pressure measuring apparatus is limited for use with a pump that has a smaller size as compared to pumps in general.

Other changes to the claims correct grammar, form and syntax without adding new matter to the claims.

Other changes to the claims incorporate the Examiner's suggestions, which are appreciated by Applicant.

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Entry of the changes to the specification and claims is respectfully requested.

Claims 1-11, 13 and 15-18 are pending in this application.

Claims 1-11 and 15-28 were objected to by the Examiner.

In response to this objection, claims 1, 5 and 15 have been changed to incorporate the Examiner's suggestions.

Claims 1-4 stand rejected under 35 U.S.C. §112, first paragraph. Under this rejection the Examiner has taken the position that the original specification does not support that the cylinder head is attached to the cylinder by gluing or adhesive in an air tight manner.

The description of the cylinder head is attached to the cylinder by gluing or adhesive in an air tight manner is found in applicants' original international application, PCT/JP2003/04456. Under the provisions of 37 CFR §1.57(a) applicants' international application is effectively incorporated by reference for omitted subject matter.

The amendment to the specification merely incorporates subject matter that was incorporated by reference and thus Oshiage et al. does not add any new matter to the specification.

Claims 1, 2, 4, 7 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese reference No. 8-189468 to Oshiage et al. in view of U.S. Patent No. 6,024,366 to Masamura.

Claim 3 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Oshiage et al. in view of Masamura and further in view of U.S. Patent No. 6,193,109 to Credle et al.

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Claims 5 and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Credle et al. in view of Oshiage et al.

Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Oshiage et al. in view of Masamura and further in view of U.S. Patent No. 5,188,519 to Spulgis.

Claim 9 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Oshiage et al. in view of Masamura and further in view of U.S. Patent No. 3,931,755 to Hatridge.

Claim 11 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Oshiage et al. in view of Masamura and further in view of U.S. Patent No. 4,343,314 to Sramek.

Claim 13 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,082,244 to Sigel et al. in view of U.S. Patent No. 5,848,879 to Hansson.

Claims 15, 16 and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Oshiage et al. in view of Spulgis.

Claim 17 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Oshiage et al. in view of Credle et al.

For the reasons set forth below, it is submitted that all of the pending claims are allowable over the prior art of record and therefore, each of the outstanding prior art rejections of the claims should properly be withdrawn.

Favorable reconsideration by the Examiner is earnestly solicited.

Claim 1

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Claim 1 is amended to distinguish over the prior art.

The Oshiage et al. utilizes a lip seal around the side wall of the piston such that only the lip seal directly contacts the inner wall of the cylinder whereas the piston of the claim 1 slides on an inner wall of the cylinder.

Further, the piston of claim 1 has a hole at a center thereof such that the suction valve is fixed whereas Oshiage et al. does not disclose such configuration.

It is clear that the piston disclosed in Oshiage et al. is much larger than the piston of claim 1, which slides on the inner wall of the cylinder having a diameter not exceeding 20 mm, it is not possible to incorporate fins of Oshiage et al. Omitting the fins would go against the teaches of Oshiage et al.

Masamura discloses a suspension apparatus of hydraulic dampers disposed on left and right sides of a vehicle (See Abstract), which teaches much bigger apparatus and the technology applied to the hydraulic application (not pneumatic application).

Accordingly, neither Oshiage et al. nor Masamura teaches such a small piston pump applied in the blood pressure measuring device.

Further, neither teaches a hole disposed at the center of piston to fix the valve or the inner diameter of the cylinder not exceeding 20 mm.

Therefore, it is respectfully submitted that the invention of claim 1 would not have been obvious over the cited references.

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Claims 2-4, and 7-11

Since Claims 2-4, and 7-11 are ultimately dependent from claim 1, which is patentable over the cited references, it is respectfully submitted that the invention recited in any one of Claims 2-4, and 7-11 would not have been obvious over the cited references.

Claim 5

As discussed in claim 1, the invention of claim 5 should be patentable over the cited references, i.e. Credle et al. and Oshiage et al., since the size of the piston pump of claim 5 is much smaller than that of Credle et al. and Oshiage et al.

Further, Credle et al. discloses a valve configuration for the liquid and the liquid is incompressible as opposed to the gas (e.g., air) being compressible.

Claim 6

Since Claim 6 is dependent from claim 5, which is patentable over the cited references, it is respectfully submitted that the invention of Claim 6 should be patentable.

Claim 13

Claim 13 is amended to clarify that the leakage inspection of the piston pump pre-assembly is performed by measuring a change of a pressure.

As stated in the Office Action, Sigel fails to teach conducting the leakage inspection of the

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piston pump pre-assembly.

Hansson also fails to teach conducting leakage inspection of a piston pump pre-assembly by measuring the change of the pressure (See column 3, lines 47-55: "any leakage of hydraulic fluid that might occur can be readily seen in the inspection").

The invention of claim 13 can achieve the leakage inspection, which cannot be performed by seeing the inside. As is often the case, the leakage may occur at some portion that may not be seen.

Therefore, the invention of claim 13 would not have been obvious over the cited references.

Claim 15

Claim 15 is amended such that the coupling member is ring-shaped so as to have a hollow portion through which air passes.

Spulgis discloses that the stem has a hollow chamber with hemispherical bottom sides conforming to the dimensions of the ball, around which the stem and disk are permitted to swivel. Therefore, Spulgis fails to teach the hollow portion of the coupling member through which air passes. Thus, the invention of claim 15 would not have been obvious over the cited references.

Claims 16-18

Since Claims 16-18 are dependent from claim 15, which is patentable over the cited references, it is respectfully submitted that the invention recited in any one of claims 16-18 should be

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patentable.

Based upon the above distinctions between the prior art relied upon by the Examiner and the present invention, and the overall teachings of prior art, properly considered as a whole, it is respectfully submitted that the Examiner cannot rely upon the prior art as required under 35 U.S.C. §103 to establish a *prima facie* case of obviousness of applicants' claimed invention.

It is, therefore, submitted that any reliance upon prior art would be improper inasmuch as the prior art does not remotely anticipate, teach, suggest or render obvious the present invention.

Entry of the present preliminary amendment and an early examination of the application are respectfully requested.

It is believed that the above represents a complete response to the Official Action and reconsideration is requested.

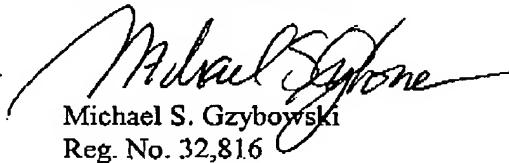
If upon consideration of the above, the Examiner should feel that there remains outstanding issues in the present application that could be resolved, the Examiner is invited to contact applicants' patent counsel at the telephone number given below to discuss such issues.

To the extent necessary, a petition for an extension of time under 37 CFR §1.136 is hereby made. Please charge the fees due in connection with the filing of this paper, including extension of

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time fees, to Deposit Account No. 12-2136 and please credit any excess fees to such deposit account.

Respectfully submitted,



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